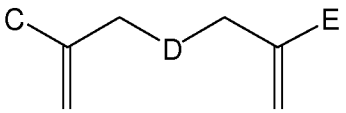
AMENDMENTS TO THE CLAIMS

1. - 52 (Canceled)

53. (New) A cross-linked polyether which is obtained by polymerizing a monomer of the general formula:



wherein

D is PEG, PPG, or poly(THF), and

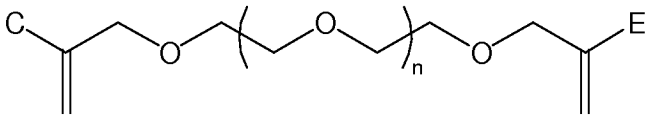
C and E independently represent an electron withdrawing group, an electron releasing group, or a C_1-C_{30} aryl.

54. (New) The cross-linked polyether of claim 53, wherein the electron withdrawing group is halogen, formyl, ester, amide, ketone, nitro, sulfoxide, sulfonate, nitrile, aldehyde, or ketone.

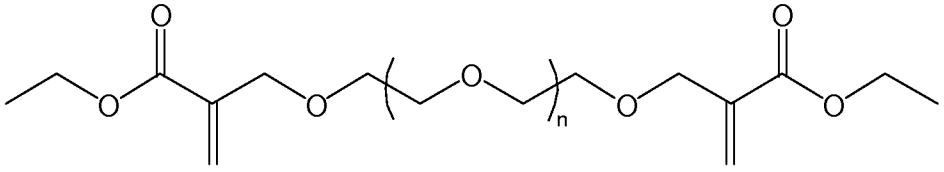
55. (New) The cross-linked polyether of claim 54, wherein the electron withdrawing group is alkyl acrylate or nitrile.

56. (New) The cross-linked polyether of claim 53, wherein the electron releasing group is selected from the group consisting of C_1 to C_{30} linear or branched alkyls, C_2 to C_{30} linear or branched aralkyls, C_1 to C_{30} aryls, ethers, and amines.

57. (New) The cross-linked polyether of claim 53, wherein the monomer has the formula:



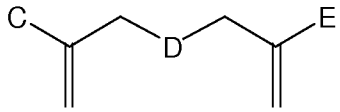
58. (New) The cross-linked polyether of claim 57, wherein the monomer has the formula:



59. (New) The cross-linked polyether of claim 53, wherein the monomer is produced under Baylis-Hillman or Phase Transfer Catalyst (PTC) conditions.

60. (New) The cross-linked polyether of claim 58, wherein the monomer is produced under Baylis-Hillman or Phase Transfer Catalyst (PTC) conditions.

61. (New) A method for preparing a cross-linked polyether, comprising the step of polymerizing a monomer of the general formula:



wherein

D is PEG, PPG, or poly(THF), and

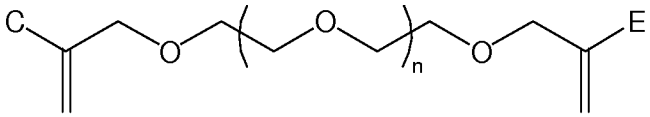
C and E independently represent an electron withdrawing group, an electron releasing group, or a C_1-C_{30} aryl.

62. (New) The method of claim 61, wherein the electron withdrawing group is halogen, formyl, ester, amide, ketone, nitro, sulfoxide, sulfonate, nitrile, aldehyde, or ketone.

63. (New) The method of claim 62, wherein the electron withdrawing group is alkyl acrylate or nitrile.

64. (New) The method of claim 61, wherein the electron releasing group is selected from the group consisting of C_1 to C_{30} linear or branched alkyls, C_2 to C_{30} linear or branched aralkyls, C_1 to C_{30} aryls, ethers, and amines.

65. (New) The method of claim 61, wherein the monomer has the formula:



66. (New) The method of claim 65, wherein the monomer has the formula: